

1. (currently amended) In a data mining agent executing in a computer system, a method of data mining comprising the steps of:

examining a request queue comprising at least one request for data mining processing;

determining if the at least one request for data mining processing can be processed;

accepting the at least one request for data mining processing if it is determined that the at least one request for data mining processing can be processed; and

processing the accepted request for data mining processing in the computer system
[[.]] :

wherein the determining step comprises the steps of:

determining if an algorithm required to process the at least one request for data mining processing is supported by the computer system;

if the algorithm required to process the at least one request for data mining processing is supported, determining whether the computer system is available for additional processing;

if the computer system is not available for additional processing, determining whether the computer system will become available for additional processing before other computer systems that might process the at least one request;

if the computer system is available for additional processing, or if the computer system will become available for additional processing before other computer systems

that might process the at least one request, determining whether the computer system will be able to complete requested processing in an allotted time; and

if the computer system will be able to complete the requested processing in the allotted time, determining that the computer system can process the at least one request for data mining processing.

2. (cancelled)

3. (currently amended) The method of claim [[2]] 1, wherein the at least one request for data mining processing comprises data defining at least one algorithm that must be performed in order to perform the requested data mining processing.

4. (original) The method of claim 3, wherein there is data defining algorithms that are supported by the computer system.

5. (original) The method of claim 4, wherein the step of determining if an algorithm required to process the at least one request for data mining processing is supported comprises comparing the data defining at least one algorithm that must be performed in order to perform the requested data mining processing with data defining algorithms that are supported by the computer system.

6. (original) The method of claim 5, wherein the data defining at least one algorithm that must be performed in order to perform the requested data mining processing and the data defining algorithms that are supported by the computer system are in extensible markup language format.

7. (original) The method of claim 5, wherein the step of determining whether the computer system is available for additional processing comprises the step of:

determining whether available idle time of the computer system is greater than a predefined or a dynamically calculated threshold.

8. (original) The method of claim 5, wherein the computer system comprises a plurality of processors and the step of determining whether the computer system is available for additional processing comprises the step of:

determining whether any of the plurality of processors is available for additional processing.

9. (original) The method of claim 8, wherein the step of determining whether any of the plurality of processors is available for additional processing comprises the step of

determining, for each of the plurality of processors, whether available idle time of the processor is greater than a predefined or a dynamically calculated threshold.

10. (original) The method of claim 5, wherein the step of determining whether the computer system is available for additional processing comprises the step of:

determining availability of the computer system for additional processing relative to at least one other computer system.

11. (original) The method of claim 5, wherein the step of determining whether the computer system will become available for additional processing before other computer systems that might process the at least one request comprises the steps of:

estimating a time to availability of the computer system;

exchanging an estimate of a time to availability of the at least one other computer system; and

comparing the time to availability of the computer system with the time to availability of the at least one other computer system.

12. (original) The method of claim 11, wherein the step of determining whether the computer system will be able to complete requested processing in an allotted time comprises the steps of:

estimating a time to completion for the requested processing on the computer system;

comparing the time to completion for the requested processing on the computer system with time allocation information included in the request for data mining processing.

13. (currently amended) In a data mining agent executing in a computer system, a method of data mining comprising the steps of:

determining that the computer system is overloaded due to tasks being executed by the computer system and causing degradation in performance of processing at least one task;

querying at least one other computer system to determine whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system;

determining whether the at least one other computer system can complete the data mining processing task being performed on the computer system faster than the computer system; and

if the at least one other computer system can complete the data mining processing task faster than the computer system, migrating the processing from the computer system to the at least one other computer system.

14. (original) The method of claim 13, wherein the migrating step comprises the steps of:

reserving the at least one other computer system for migration;

interrupting and checkpointing the data mining processing task on the computer system; and

enqueueing a request to the at least one other computer system for continued processing of the data mining processing task.

15. (original) The method of claim 14, wherein the step of determining that the computer system is overloaded comprises the step of:

determining that the computer system is overloaded if a utilization of a processor of the computer system is greater than a predefined threshold for a predefined time.

16. (original) The method of claim 15, wherein the querying step comprises the step of:

generating an estimate of a time to complete the data mining processing task.

17. (original) The method of claim 16, wherein the generating step comprises the steps of:

estimating an amount of processing that must be performed to complete the data mining processing task;

estimating a processor utilization that will be available to process the data mining processing task; and

estimating a time to complete the data mining processing task based on the estimate of the amount of processing that must be performed, the estimate of available processor utilization, and a speed of the processor.

18. (original) The method of claim 17, wherein the querying step further comprises the step of:

requesting information from the at least one other computer system, the information including a speed of the at least one other computer system and an estimate of processor utilization of the at least one other computer system.

19. (original) The method of claim 18, wherein the step of determining whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system comprises the step of:

estimating a time to complete the data mining processing task for the at least one other computer system based on the estimate of the amount of processing that must be performed to complete the data mining processing task, the speed of the at least one other computer system and the estimate of processor utilization of the at least one other computer system.

20. (original) The method of claim 19, wherein the step of determining whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system further comprises the steps of:

adding an estimate of a time to migrate the data mining processing task to the at least one other computer system and the estimate of the time to complete the data mining processing task for the at least one other computer system;

comparing the estimate of the time to complete the data mining processing task for the computer system with the estimate of the time to complete the data mining processing task for the at least one other computer system; and

determining whether the at least one other computer system can complete the data mining processing task being performed on the computer system faster than the computer system.

21. (original) The method of claim 17, wherein the querying step further comprises the step of:

transmitting to the at least one other computer system the estimate of the amount of processing that must be performed to complete the data mining processing task; and

receiving from the at least one other computer system an estimate of a time to complete the data mining processing task for the at least one other computer system

22. (original) The method of claim 21, wherein the step of determining whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system further comprises the steps of:

adding an estimate of a time to migrate the data mining processing task to the at least one other computer system and the estimate of the time to complete the data mining processing task for the at least one other computer system;

comparing the estimate of the time to complete the data mining processing task for the computer system with the estimate of the time to complete the data mining processing task for the at least one other computer system; and

determining whether the at least one other computer system can complete the data mining processing task being performed on the computer system faster than the computer system.

23. (currently amended) In a data mining agent executing in a computer system, a method of data mining comprising the steps of:

determining that a processing load in the computer system is high relative to at least one other computer system, the processing load based on a processor utilization of the computer system due to tasks being executed by the computer system;

determining a remaining cost of completing processing of a data mining processing task being processed by the computer system;

determining whether the at least one other computer system can complete processing of the data mining processing task at a lower cost than the computer system; and

if the at least one other computer system can complete processing of the data mining processing task at a lower cost than the computer system, migrating processing of the data mining processing task to the at least one computer system.

24. (original) The method of claim 23, wherein the step of determining that a processing load in the computer system is high relative to at least one other computer system comprises the steps of:

- determining a processor utilization of the computer system;
- determining a processor utilization of the at least one other computer system; and
- determining that the processor utilization of the computer system is greater than a predefined amount higher than the processor utilization of the at least one other computer system.

25. (original) The method of claim 24, wherein the remaining cost of completing processing of a data mining processing task is determined based on a time to complete processing of the data mining processing task.

26. (original) The method of claim 24, wherein the remaining cost of completing processing of a data mining processing task is determined based on a time to complete processing of the data mining processing task and on additional factors, including actual costs of use of the computer system.

27. (original) The method of claim 24, wherein the step of determining a remaining cost of completing processing of a data mining processing task being processed by the computer system comprises the steps of:

estimating an amount of processing that must be performed to complete the data mining processing task;

estimating a processor utilization that will be available to process the data mining processing task; and

estimating a time to complete the data mining processing task based on the estimate of the amount of processing that must be performed, the estimate of available processor utilization, and a speed of the processor.

28. (original) The method of claim 27, further comprising the step of:

estimating additional factors, including actual costs of use of the computer system.

29. (original) The method of claim 27, wherein the step of determining whether the at least one other computer system can complete processing of the data mining processing task at a lower cost than the computer system comprises the step of:

soliciting a bid for completing processing of the data mining processing task from the at least one other computer system.

30. (original) The method of claim 29, wherein the soliciting step comprises the steps of:

transmitting a request for a bid to the at least one other computer system, the request for the bid including information relating to the amount of processing that must be performed to complete the data mining processing task; and

receiving a bid from the at least one other computer system, the bid including an estimate of a cost of completing processing of the data mining processing task on the at least one other computer system.

31. (currently amended) A computer system for performing data mining, comprising:

a processor operable to execute computer program instructions;

a memory operable to store computer program instructions executable by the processor; and

a data mining agent comprising computer program instructions, for performing the steps of:

examining a request queue comprising at least one request for data mining processing,

determining if the at least one request for data mining processing can be processed,

accepting the at least one request for data mining processing if it is determined that the at least one request for data mining processing can be processed, and

processing the accepted request for data mining processing in the computer system
[[.]] :

wherein the determining step comprises the steps of:

determining if an algorithm required to process the at least one request for data mining processing is supported by the computer system;

if the algorithm required to process the at least one request for data mining processing is supported, determining whether the computer system is available for additional processing;

if the computer system is not available for additional processing, determining whether the computer system will become available for additional processing before other computer systems that might process the at least one request;

if the computer system is available for additional processing, or if the computer system will become available for additional processing before other computer systems that might process the at least one request, determining whether the computer system will be able to complete requested processing in an allotted time; and

if the computer system will be able to complete the requested processing in the allotted time, determining that the computer system can process the at least one request for data mining processing.

32. (cancelled)

33. (currently amended) The system of claim ~~[[32]]~~ 31, wherein the at least one request for data mining processing comprises data defining at least one algorithm that must be performed in order to perform the requested data mining processing.

34. (original) The system of claim 33, wherein there is data defining algorithms that are supported by the computer system.

35. (original) The system of claim 34, wherein the step of determining if an algorithm required to process the at least one request for data mining processing is supported comprises comparing the data defining at least one algorithm that must be performed in order to perform the requested data mining processing with data defining algorithms that are supported by the computer system.

36. (original) The system of claim 35, wherein the data defining at least one algorithm that must be performed in order to perform the requested data mining processing and the data defining algorithms that are supported by the computer system are in extensible markup language format.

37. (original) The system of claim 35, wherein the step of determining whether the computer system is available for additional processing comprises the step of:

determining whether available idle time of the computer system is greater than a predefined or a dynamically calculated threshold.

38. (original) The system of claim 35, wherein the computer system comprises a plurality of processors and the step of determining whether the computer system is available for additional processing comprises the step of:

determining whether any of the plurality of processors is available for additional processing.

39. (original) The system of claim 38, wherein the step of determining whether any of the plurality of processors is available for additional processing comprises the step of

determining, for each of the plurality of processors, whether available idle time of the processor is greater than a predefined or a dynamically calculated threshold.

40. (original) The system of claim 35, wherein the step of determining whether the computer system is available for additional processing comprises the step of:

determining availability of the computer system for additional processing relative to at least one other computer system.

41. (original) The system of claim 35, wherein the step of determining whether the computer system will become available for additional processing before other computer systems that might process the at least one request comprises the steps of:

estimating a time to availability of the computer system;

exchanging an estimate of a time to availability of the at least one other computer system; and

comparing the time to availability of the computer system with the time to availability of the at least one other computer system.

42. (original) The system of claim 41, wherein the step of determining whether the computer system will be able to complete requested processing in an allotted time comprises the steps of:

estimating a time to completion for the requested processing on the computer system;

comparing the time to completion for the requested processing on the computer system with time allocation information included in the request for data mining processing.

43. (currently amended) A computer system for performing data mining, comprising:

a processor operable to execute computer program instructions;

a memory operable to store computer program instructions executable by the processor; and

a data mining agent comprising computer program instructions, for performing the steps of:

determining that the computer system is overloaded due to tasks being executed by the computer system and causing degradation in performance of processing at least one task,

querying at least one other computer system to determine whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system,

determining whether the at least one other computer system can complete the data mining processing task being performed on the computer system faster than the computer system, and

if the at least one other computer system can complete the data mining processing task faster than the computer system, migrating the processing from the computer system to the at least one other computer system.

44. (original) The system of claim 43, wherein the migrating step comprises the steps of:

reserving the at least one other computer system for migration;

interrupting and checkpointing the data mining processing task on the computer system; and

enqueueing a request to the at least one other computer system for continued processing of the data mining processing task.

45. (original) The system of claim 44, wherein the step of determining that the computer system is overloaded comprises the step of:

determining that the computer system is overloaded if a utilization of a processor of the computer system is greater than a predefined threshold for a predefined time.

46. (original) The system of claim 45, wherein the querying step comprises the step of:

generating an estimate of a time to complete the data mining processing task.

47. (original) The system of claim 46, wherein the generating step comprises the steps of:

estimating an amount of processing that must be performed to complete the data mining processing task;

estimating a processor utilization that will be available to process the data mining processing task; and

estimating a time to complete the data mining processing task based on the estimate of the amount of processing that must be performed, the estimate of available processor utilization, and a speed of the processor.

48. (original) The system of claim 47, wherein the querying step further comprises the step of:

requesting information from the at least one other computer system, the information including a speed of the at least one other computer system and an estimate of processor utilization of the at least one other computer system.

49. (original) The system of claim 48, wherein the step of determining whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system comprises the step of:

estimating a time to complete the data mining processing task for the at least one other computer system based on the estimate of the amount of processing that must be performed to complete the data mining processing task, the speed of the at least one other

computer system and the estimate of processor utilization of the at least one other computer system.

50. (original) The system of claim 49, wherein the step of determining whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system further comprises the steps of:

adding an estimate of a time to migrate the data mining processing task to the at least one other computer system and the estimate of the time to complete the data mining processing task for the at least one other computer system;

comparing the estimate of the time to complete the data mining processing task for the computer system with the estimate of the time to complete the data mining processing task for the at least one other computer system; and

determining whether the at least one other computer system can complete the data mining processing task being performed on the computer system faster than the computer system.

51. (original) The system of claim 47, wherein the querying step further comprises the step of:

transmitting to the at least one other computer system the estimate of the amount of processing that must be performed to complete the data mining processing task; and

receiving from the at least one other computer system an estimate of a time to complete the data mining processing task for the at least one other computer system

52. (original) The system of claim 51, wherein the step of determining whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system further comprises the steps of:

adding an estimate of a time to migrate the data mining processing task to the at least one other computer system and the estimate of the time to complete the data mining processing task for the at least one other computer system;

comparing the estimate of the time to complete the data mining processing task for the computer system with the estimate of the time to complete the data mining processing task for the at least one other computer system; and

determining whether the at least one other computer system can complete the data mining processing task being performed on the computer system faster than the computer system.

53. (currently amended) A computer system for performing data mining, comprising:

a processor operable to execute computer program instructions;

a memory operable to store computer program instructions executable by the processor; and

a data mining agent comprising computer program instructions, for performing the steps of:

determining that a processing load in the computer system is high relative to at least one other computer system, the processing load based on a processor utilization of the computer system due to tasks being executed by the computer system,

determining a remaining cost of completing processing of a data mining processing task being processed by the computer system,

determining whether the at least one other computer system can complete processing of the data mining processing task at a lower cost than the computer system, and

if the at least one other computer system can complete processing of the data mining processing task at a lower cost than the computer system, migrating processing of the data mining processing task to the at least one computer system.

54. (original) The system of claim 53, wherein the step of determining that a processing load in the computer system is high relative to at least one other computer system comprises the steps of:

determining a processor utilization of the computer system;

determining a processor utilization of the at least one other computer system; and

determining that the processor utilization of the computer system is greater than a predefined amount higher than the processor utilization of the at least one other computer system.

55. (original) The system of claim 54, wherein the remaining cost of completing processing of a data mining processing task is determined based on a time to complete processing of the data mining processing task.

56. (original) The system of claim 54, wherein the remaining cost of completing processing of a data mining processing task is determined based on a time to complete processing of the data mining processing task and on additional factors, including actual costs of use of the computer system.

57. (original) The system of claim 54, wherein the step of determining a remaining cost of completing processing of a data mining processing task being processed by the computer system comprises the steps of:

- estimating an amount of processing that must be performed to complete the data mining processing task;

- estimating a processor utilization that will be available to process the data mining processing task; and

- estimating a time to complete the data mining processing task based on the estimate of the amount of processing that must be performed, the estimate of available processor utilization, and a speed of the processor.

58. (original) The system of claim 57, further comprising the step of:

estimating additional factors, including actual costs of use of the computer system.

59. (original) The system of claim 57, wherein the step of determining whether the at least one other computer system can complete processing of the data mining processing task at a lower cost than the computer system comprises the step of:

soliciting a bid for completing processing of the data mining processing task from the at least one other computer system.

60. (original) The system of claim 59, wherein the soliciting step comprises the steps of:

transmitting a request for a bid to the at least one other computer system, the request for the bid including information relating to the amount of processing that must be performed to complete the data mining processing task; and

receiving a bid from the at least one other computer system, the bid including an estimate of a cost of completing processing of the data mining processing task on the at least one other computer system.

61. (currently amended) A computer program product for performing data mining in a computer system data processing system, comprising:

a computer readable medium;

computer program instructions, recorded on the computer readable medium, executable by a processor, for performing the steps of:

examining a request queue comprising at least one request for data mining processing;

determining if the at least one request for data mining processing can be processed;

accepting the at least one request for data mining processing if it is determined that the at least one request for data mining processing can be processed; and

processing the accepted request for data mining processing in the computer system
[[.]] ;

wherein the determining step comprises the steps of:

determining if an algorithm required to process the at least one request for data mining processing is supported by the computer system;

if the algorithm required to process the at least one request for data mining processing is supported, determining whether the computer system is available for additional processing;

if the computer system is not available for additional processing, determining whether the computer system will become available for additional processing before other computer systems that might process the at least one request;

if the computer system is available for additional processing, or if the computer system will become available for additional processing before other computer systems that might process the at least one request, determining whether the computer system will be able to complete requested processing in an allotted time; and

if the computer system will be able to complete the requested processing in the allotted time, determining that the computer system can process the at least one request for data mining processing.

62. (cancelled)

63. (currently amended) The computer program product of claim [[62]] 61, wherein the at least one request for data mining processing comprises data defining at least one algorithm that must be performed in order to perform the requested data mining processing.

64. (original) The computer program product of claim 63, wherein there is data defining algorithms that are supported by the computer system.

65. (original) The computer program product of claim 64, wherein the step of determining if an algorithm required to process the at least one request for data mining processing is supported comprises comparing the data defining at least one algorithm that must be performed in order to perform the requested data mining processing with data defining algorithms that are supported by the computer system.

66. (original) The computer program product of claim 65, wherein the data defining at least one algorithm that must be performed in order to perform the requested data mining processing and the data defining algorithms that are supported by the computer system are in extensible markup language format.

67. (original) The computer program product of claim 65, wherein the step of determining whether the computer system is available for additional processing comprises the step of:

determining whether available idle time of the computer system is greater than a predefined or a dynamically calculated threshold.

68. (original) The computer program product of claim 65, wherein the computer system comprises a plurality of processors and the step of determining whether the computer system is available for additional processing comprises the step of:

determining whether any of the plurality of processors is available for additional processing.

69. (original) The computer program product of claim 68, wherein the step of determining whether any of the plurality of processors is available for additional processing comprises the step of

determining, for each of the plurality of processors, whether available idle time of the processor is greater than a predefined or a dynamically calculated threshold.

70. (original) The computer program product of claim 65, wherein the step of determining whether the computer system is available for additional processing comprises the step of:

determining availability of the computer system for additional processing relative to at least one other computer system.

71. (original) The computer program product of claim 65, wherein the step of determining whether the computer system will become available for additional processing before other computer systems that might process the at least one request comprises the steps of:

estimating a time to availability of the computer system;

exchanging an estimate of a time to availability of the at least one other computer system; and

comparing the time to availability of the computer system with the time to availability of the at least one other computer system.

72. (original) The computer program product of claim 71, wherein the step of determining whether the computer system will be able to complete requested processing in an allotted time comprises the steps of:

estimating a time to completion for the requested processing on the computer system;

comparing the time to completion for the requested processing on the computer system with time allocation information included in the request for data mining processing.

73. (currently amended) A computer program product for performing data mining in a computer system data processing system, comprising:

- a computer readable medium;

- computer program instructions, recorded on the computer readable medium, executable by a processor, for performing the steps of:

- determining that the computer system is overloaded due to tasks being executed by the computer system and causing degradation in performance of processing at least one task;

- querying at least one other computer system to determine whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system;

- determining whether the at least one other computer system can complete the data mining processing task being performed on the computer system faster than the computer system; and

- if the at least one other computer system can complete the data mining processing task faster than the computer system, migrating the processing from the computer system to the at least one other computer system.

74. (original) The computer program product of claim 73, wherein the migrating step comprises the steps of:

reserving the at least one other computer system for migration;
interrupting and checkpointing the data mining processing task on the computer system; and
enqueueing a request to the at least one other computer system for continued processing of the data mining processing task.

75. (original) The computer program product of claim 74, wherein the step of determining that the computer system is overloaded comprises the step of:

determining that the computer system is overloaded if a utilization of a processor of the computer system is greater than a predefined threshold for a predefined time.

76. (original) The computer program product of claim 75, wherein the querying step comprises the step of:

generating an estimate of a time to complete the data mining processing task.

77. (original) The computer program product of claim 76, wherein the generating step comprises the steps of:

estimating an amount of processing that must be performed to complete the data mining processing task;

estimating a processor utilization that will be available to process the data mining processing task; and

estimating a time to complete the data mining processing task based on the estimate of the amount of processing that must be performed, the estimate of available processor utilization, and a speed of the processor.

78. (original) The computer program product of claim 77, wherein the querying step further comprises the step of:

requesting information from the at least one other computer system, the information including a speed of the at least one other computer system and an estimate of processor utilization of the at least one other computer system.

79. (original) The computer program product of claim 78, wherein the step of determining whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system comprises the step of:

estimating a time to complete the data mining processing task for the at least one other computer system based on the estimate of the amount of processing that must be performed to complete the data mining processing task, the speed of the at least one other computer system and the estimate of processor utilization of the at least one other computer system.

80. (original) The computer program product of claim 79, wherein the step of determining whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system further comprises the steps of:

adding an estimate of a time to migrate the data mining processing task to the at least one other computer system and the estimate of the time to complete the data mining processing task for the at least one other computer system;

comparing the estimate of the time to complete the data mining processing task for the computer system with the estimate of the time to complete the data mining processing task for the at least one other computer system; and

determining whether the at least one other computer system can complete the data mining processing task being performed on the computer system faster than the computer system.

81. (original) The computer program product of claim 77, wherein the querying step further comprises the step of:

transmitting to the at least one other computer system the estimate of the amount of processing that must be performed to complete the data mining processing task; and

receiving from the at least one other computer system an estimate of a time to complete the data mining processing task for the at least one other computer system

82. (original) The computer program product of claim 81, wherein the step of determining whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system further comprises the steps of:

adding an estimate of a time to migrate the data mining processing task to the at least one other computer system and the estimate of the time to complete the data mining processing task for the at least one other computer system;

comparing the estimate of the time to complete the data mining processing task for the computer system with the estimate of the time to complete the data mining processing task for the at least one other computer system; and

determining whether the at least one other computer system can complete the data mining processing task being performed on the computer system faster than the computer system.

83. (currently amended) A computer program product for performing data mining in a computer system data processing system, comprising:

a computer readable medium;

computer program instructions, recorded on the computer readable medium, executable by a processor, for performing the steps of:

determining that a processing load in the computer system is high relative to at least one other computer system, the processing load based on a processor utilization of the computer system due to tasks being executed by the computer system;

determining a remaining cost of completing processing of a data mining processing task being processed by the computer system;

determining whether the at least one other computer system can complete processing of the data mining processing task at a lower cost than the computer system;
and

if the at least one other computer system can complete processing of the data mining processing task at a lower cost than the computer system, migrating processing of the data mining processing task to the at least one computer system.

84. (original) The computer program product of claim 83, wherein the step of determining that a processing load in the computer system is high relative to at least one other computer system comprises the steps of:

determining a processor utilization of the computer system;

determining a processor utilization of the at least one other computer system; and

determining that the processor utilization of the computer system is greater than a predefined amount higher than the processor utilization of the at least one other computer system.

85. (original) The computer program product of claim 84, wherein the remaining cost of completing processing of a data mining processing task is determined based on a time to complete processing of the data mining processing task.

86. (original) The computer program product of claim 84, wherein the remaining cost of completing processing of a data mining processing task is determined based on a time to complete processing of the data mining processing task and on additional factors, including actual costs of use of the computer system.

87. (original) The computer program product of claim 84, wherein the step of determining a remaining cost of completing processing of a data mining processing task being processed by the computer system comprises the steps of:

- estimating an amount of processing that must be performed to complete the data mining processing task;

- estimating a processor utilization that will be available to process the data mining processing task; and

- estimating a time to complete the data mining processing task based on the estimate of the amount of processing that must be performed, the estimate of available processor utilization, and a speed of the processor.

88. (original) The computer program product of claim 87, further comprising the step of:

- estimating additional factors, including actual costs of use of the computer system.

89. (original) The computer program product of claim 87, wherein the step of determining whether the at least one other computer system can complete processing of

the data mining processing task at a lower cost than the computer system comprises the step of:

soliciting a bid for completing processing of the data mining processing task from the at least one other computer system.

90. (original) The computer program product of claim 89, wherein the soliciting step comprises the steps of:

transmitting a request for a bid to the at least one other computer system, the request for the bid including information relating to the amount of processing that must be performed to complete the data mining processing task; and

receiving a bid from the at least one other computer system, the bid including an estimate of a cost of completing processing of the data mining processing task on the at least one other computer system.

91. (currently amended) A data mining agent for managing data mining in a computer system, the data mining agent comprising:

means for examining a request queue comprising at least one request for data mining processing;

means for determining if the at least one request for data mining processing can be processed;

means for accepting the at least one request for data mining processing if it is determined that the at least one request for data mining processing can be processed; and

means for processing the accepted request for data mining processing in the computer system [[.]] ;

wherein the determining means comprises:

means for determining if an algorithm required to process the at least one request for data mining processing is supported by the computer system;

means for determining whether the computer system is available for additional processing, if the algorithm required to process the at least one request for data mining processing is supported;

means for determining whether the computer system will become available for additional processing before other computer systems that might process the at least one request, if the computer system is not available for additional processing;

means for determining whether the computer system will be able to complete requested processing in an allotted time, if the computer system is available for additional processing, or if the computer system will become available for additional processing before other computer systems that might process the at least one request; and

means for determining that the computer system can process the at least one request for data mining processing, if the computer system will be able to complete the requested processing in the allotted time.

92. (cancelled)

93. (currently amended) The data mining agent of claim [[92]] 91, wherein the at least one request for data mining processing comprises data defining at least one algorithm that must be performed in order to perform the requested data mining processing.

94. (original) The data mining agent of claim 93, wherein there is data defining algorithms that are supported by the computer system.

95. (original) The data mining agent of claim 94, wherein the means for determining if an algorithm required to process the at least one request for data mining processing is supported comprises means for comparing the data defining at least one algorithm that must be performed in order to perform the requested data mining processing with data defining algorithms that are supported by the computer system.

96. (original) The data mining agent of claim 95, wherein the data defining at least one algorithm that must be performed in order to perform the requested data mining processing and the data defining algorithms that are supported by the computer system are in extensible markup language format.

97. (original) The data mining agent of claim 95, wherein the means for determining whether the computer system is available for additional processing comprises:

means for determining whether available idle time of the computer system is greater than a predefined or a dynamically calculated threshold.

98. (original) The data mining agent of claim 95, wherein the computer system comprises a plurality of processors and the means for determining whether the computer system is available for additional processing comprises:

means for determining whether any of the plurality of processors is available for additional processing.

99. (original) The data mining agent of claim 98, wherein the means for determining whether any of the plurality of processors is available for additional processing comprises:

means for determining, for each of the plurality of processors, whether available idle time of the processor is greater than a predefined or a dynamically calculated threshold.

100. (original) The data mining agent of claim 95, wherein the means for determining whether the computer system is available for additional processing comprises:

means for determining availability of the computer system for additional processing relative to at least one other computer system.

101. (original) The data mining agent of claim 95, wherein the means for determining whether the computer system will become available for additional processing before other computer systems that might process the at least one request comprises:

means for estimating a time to availability of the computer system;

means for exchanging an estimate of a time to availability of the at least one other computer system; and

means for comparing the time to availability of the computer system with the time to availability of the at least one other computer system.

102. (original) The data mining agent of claim 101, wherein the means for determining whether the computer system will be able to complete requested processing in an allotted time comprises:

means for estimating a time to completion for the requested processing on the computer system;

means for comparing the time to completion for the requested processing on the computer system with time allocation information included in the request for data mining processing.

103. (currently amended) A data mining agent for managing data mining in a computer system, the data mining agent comprising:

means for determining that the computer system is overloaded due to tasks being executed by the computer system and causing degradation in performance of processing at least one task;

means for querying at least one other computer system to determine whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system;

means for determining whether the at least one other computer system can complete the data mining processing task being performed on the computer system faster than the computer system; and

means for migrating the processing from the computer system to the at least one other computer system, if the at least one other computer system can complete the data mining processing task faster than the computer system.

104. (original) The data mining agent of claim 103, wherein the migrating means comprises:

means for reserving the at least one other computer system for migration;

means for interrupting and checkpointing the data mining processing task on the computer system; and

means for enqueueing a request to the at least one other computer system for continued processing of the data mining processing task.

105. (original) The data mining agent of claim 104, wherein the means for determining that the computer system is overloaded comprises:

means for determining that the computer system is overloaded if a utilization of a processor of the computer system is greater than a predefined threshold for a predefined time.

106. (original) The data mining agent of claim 105, wherein the querying means comprises:

means for generating an estimate of a time to complete the data mining processing task.

107. (original) The data mining agent of claim 106, wherein the generating means comprises:

means for estimating an amount of processing that must be performed to complete the data mining processing task;

means for estimating a processor utilization that will be available to process the data mining processing task; and

means for estimating a time to complete the data mining processing task based on the estimate of the amount of processing that must be performed, the estimate of available processor utilization, and a speed of the processor.

108. (original) The data mining agent of claim 107, wherein the querying means further comprises:

means for requesting information from the at least one other computer system, the information including a speed of the at least one other computer system and an estimate of processor utilization of the at least one other computer system.

109. (original) The data mining agent of claim 18, wherein the means for determining whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system comprises:

means for estimating a time to complete the data mining processing task for the at least one other computer system based on the estimate of the amount of processing that must be performed to complete the data mining processing task, the speed of the at least one other computer system and the estimate of processor utilization of the at least one other computer system.

110. (original) The data mining agent of claim 19, wherein the means for determining whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system further comprises:

means for adding an estimate of a time to migrate the data mining processing task to the at least one other computer system and the estimate of the time to complete the data mining processing task for the at least one other computer system;

means for comparing the estimate of the time to complete the data mining processing task for the computer system with the estimate of the time to complete the data mining processing task for the at least one other computer system; and

means for determining whether the at least one other computer system can complete the data mining processing task being performed on the computer system faster than the computer system.

111. (original) The data mining agent of claim 17, wherein the querying means further comprises:

means for transmitting to the at least one other computer system the estimate of the amount of processing that must be performed to complete the data mining processing task; and

means for receiving from the at least one other computer system an estimate of a time to complete the data mining processing task for the at least one other computer system

112. (original) The data mining agent of claim 21, wherein the means for determining whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system further comprises:

means for adding an estimate of a time to migrate the data mining processing task to the at least one other computer system and the estimate of the time to complete the data mining processing task for the at least one other computer system;

means for comparing the estimate of the time to complete the data mining processing task for the computer system with the estimate of the time to complete the data mining processing task for the at least one other computer system; and

means for determining whether the at least one other computer system can complete the data mining processing task being performed on the computer system faster than the computer system.

113. (currently amended) A data mining agent for managing data mining in a computer system, the data mining agent comprising:

means for determining that a processing load in the computer system is high relative to at least one other computer system, the processing load based on a processor utilization of the computer system due to tasks being executed by the computer system;

means for determining a remaining cost of completing processing of a data mining processing task being processed by the computer system;

means for determining whether the at least one other computer system can complete processing of the data mining processing task at a lower cost than the computer system; and

means for migrating processing of the data mining processing task to the at least one computer system, the at least one other computer system can complete processing of the data mining processing task at a lower cost than the computer system.

114. (original) The data mining agent of claim 113 wherein the step of determining that a processing load in the computer system is high relative to at least one other computer system comprises:

means for determining a processor utilization of the computer system;

means for determining a processor utilization of the at least one other computer system; and

means for determining that the processor utilization of the computer system is greater than a predefined amount higher than the processor utilization of the at least one other computer system.

115. (original) The data mining agent of claim 114, wherein the remaining cost of completing processing of a data mining processing task is determined based on a time to complete processing of the data mining processing task.

116. (original) The data mining agent of claim 114, wherein the remaining cost of completing processing of a data mining processing task is determined based on a time to complete processing of the data mining processing task and on additional factors, including actual costs of use of the computer system.

117. (original) The data mining agent of claim 114, wherein the means for determining a remaining cost of completing processing of a data mining processing task being processed by the computer system comprises:

means for estimating an amount of processing that must be performed to complete the data mining processing task;

means for estimating a processor utilization that will be available to process the data mining processing task; and

means for estimating a time to complete the data mining processing task based on the estimate of the amount of processing that must be performed, the estimate of available processor utilization, and a speed of the processor.

118. (original) The data mining agent of claim 117, further comprising:

means for estimating additional factors, including actual costs of use of the computer system.

119. (original) The data mining agent of claim 117, wherein the means for determining whether the at least one other computer system can complete processing of the data mining processing task at a lower cost than the computer system comprises:

means for soliciting a bid for completing processing of the data mining processing task from the at least one other computer system.

120. (original) The data mining agent of claim 119, wherein the soliciting means comprises:

means for transmitting a request for a bid to the at least one other computer system, the request for the bid including information relating to the amount of processing that must be performed to complete the data mining processing task; and

means for receiving a bid from the at least one other computer system, the bid including an estimate of a cost of completing processing of the data mining processing task on the at least one other computer system.